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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,447	02/06/2004	Takeo Shiba	NITT.0185	5163

7590

10/30/2006

Reed Smith LLP

Suite 1400

3110 Fairview Park Drive

Falls Church, VA 22042-4503

EXAMINER

HON, SOW FUN

ART UNIT

PAPER NUMBER

1772

DATE MAILED: 10/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action  
Before the Filing of an Appeal Brief**

Application No.

10/772,447

Applicant(s)

SHIBA ET AL.

Examiner

Sow-Fun Hon

Art Unit

1772

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 16 October 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☐ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.  
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☒ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: None.  
Claim(s) objected to: None.  
Claim(s) rejected: 1-25.  
Claim(s) withdrawn from consideration: None.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☐ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: \_\_\_\_\_.  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_.  
13. ☒ Other: Attachment to advisory action.

***Advisory Action***

1. The proposed amendment dated 10/16/06 will not be entered because it raises new issues that would require further consideration and search, and presents additional new claims 26-28 without canceling a corresponding number of finally rejected claims.
2. Applicant's arguments in pages 6-8 of Applicant's remarks, are directed against the new limitation of "each having only a drain electrode connected to a corresponding one of the phase-change device elements", which is part of the proposed amendment that has not been entered. Hence said arguments are not addressed in this advisory action.
3. Applicant argues that because Kurokawa provides a frame memory utilizing electrically erasable and programmable read only memory (EEPROM) having floating gates, Shindo discloses a solar battery having a p-l-n structure utilizing a single-crystalline Si substrate or a memory cell including a TFT, and a method of manufacturing such a solar battery or memory, and Ovshinsky provides a phase change memory for an optical disk, [that these references are non-analogous art] and hence a mere combination of said three references would produce a configuration of an image display device different in structure, type, function and application that the image display device recited in the independent claims of the invention.

Applicant is respectfully apprised that Kurokawa is the primary reference that teaches an image display device (column 18, lines 65-66) comprising a nonvolatile memory device having a memory comprised of transistors (memory transistor, column 17, lines 53-55, plurality of transistors, column 3, line 39), and that Shindo is the

Art Unit: 1772

secondary device relied upon as evidence that while Kurokawa fails to disclose that these memory transistors are thin films, transistors in the form of thin films are well known in the art, and that thin film transistors are used as part of a nonvolatile memory device (column 133, lines 1-18) for the purpose of utilizing the physical properties of the thin films. Shindo teaches a semiconductor device which can be either a solar cell or a nonvolatile memory (column 1, lines 9-20), and which uses thin film transistors (memory cells formed by thin film transistors, column 133, lines 1-2), wherein the nonvolatile memory is utilized in an EPROM or a flash EPROM (column 180, lines 18-26). The EEPROM of Kurokawa is a species of the EPROM, and can be a flash type (memory, column 5, lines 64-66). Thus, Shindo and Kurokawa are both directed to a nonvolatile memory utilized in an EPROM or flash EPROM, and are analogous art.

Regarding the validity of Ovshinsky, Ovshinsky is the secondary reference that teaches that the reversible amorphous to crystalline phase change of semiconductor materials (column 5, lines 12-16) is used in nonvolatile memory devices for the purpose of providing high-speed, low-energy, direct-overwrite and grey-scale operation (column 21, lines 25-45), which approaches the nonvolatility and random access programming capabilities of an EEPROM (column 40, lines 51-58). Kurokawa teaches a semiconductor nonvolatile memory (abstract). Ovshinsky teaches a semiconductor nonvolatile memory (column 1, lines 1-18). Thus, all three references are directed to a semiconductor nonvolatile memory, and are analogous art. Therefore, a combination of Kurokawa, Shindo and Ovshinsky does produce a configuration of an image display device that meets the image display device recited in the present claims.

Art Unit: 1772

4. Applicant argues regarding claims 7 and 18, that Ovshinsky merely discloses that “repeatable and detectable switching resistance values can be effected”, and that this statement does not teach or suggest the configuration of the present invention in which the variable-resistance memory element is free from variations in resistance value due to registration errors of masks.

Applicant is respectfully apprised that in using the term “repeatable” to describe the switching resistance values, Ovshinsky teaches that there are no variations in resistance values due to errors, wherein registration errors of masks are but a subset of the errors. Hence, Ovshinsky does indirectly teach that the variable-resistance memory element is free from variations in resistance value due to registration errors of masks.

5. Applicant argues regarding claim 10, that Kurokawa’s frame memory disclosed is configured to store data corresponding to each of the pixels, while Applicant’s invention uses each of the plurality of pixels itself to store corresponding data therein, wherein the display having pixel memories is completely different in structure, type and function from that of Kurokawa.

Applicant is respectfully apprised that the pixel memory and the structure of the pixel memory are not recited in the present claims. Kurokawa teaches that the image signal is stored in the nonvolatile memory to be inputted into the pixel portion to be displayed (column 19, lines 39-44), that there is a plurality of pixels (column 19, lines 36-40), and that there is a plurality of memory transistors (column 3, line 39), wherein the total memory capacity is equal to at least the number of the pixels X 6 bits (column 19, lines 39-44), thus implying that each of said plurality of pixels has a function which

Art Unit: 1772

retains display data therein, a feature which is well-known in the art, as evidenced by US 4,875,190 and US 4,668,568.

Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number is (571)272-1492. The examiner can normally be reached Monday to Friday from 10:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached at (571)272-1498. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*S. Hon*

Sow-Fun Hon

*10/25/06*

*RENA DYE*

RENA DYE  
SUPERVISORY PATENT EXAMINER

*Technology Center 1722*

*10/27/06*